FACTS *to Know* ABOUT A

Guaranteed Highest Quality
CRAFTSMAN
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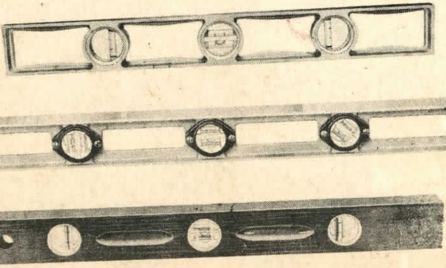
LEVEL

No tool is more important than a level. And there's nothing more important in a level than its accuracy. For accuracy determines whether your finished job will be completely satisfactory. For these and other reasons it is essential to choose your level with care and patience.



FEATURES TO CHECK WHEN BUYING A LEVEL

What is the crown of the vials? How are they set? Are the working edges true? Are the vials easy to read? Can the vials be adjusted or replaced? Is the level easy to grasp and does it feel balanced? If the frame is of metal, can it be straightened in event of rough handling? Are the vials shock resistant? How versatile is the level? Does it meet all the requirements of **your job?**

YOUR GUARANTEE

Craftsman levels are guaranteed against defects in materials and workmanship. They have been thoroughly tested at the factory, but we request that you carefully inspect them before buying. We will replace or repair any level defective in material or workmanship, but we cannot guarantee them against abuse or careless handling.

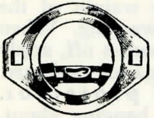
All Craftsman level vials and vial holders are designed with better service in mind. When working with a Craftsman level you get a clear, easy to read sight — and the vial markings are a ceramic — fired on to stay. The vials themselves have a modified crown, not too flat — not too curved, to provide sensitive accuracy while still keeping speed of operation. There are two primary types of levels, the adjustable type and the solid type.

WHAT MAKES A CRAFTSMAN LEVEL SUPERIOR?

Craftsman levels are built by skilled craftsmen who know the needs of other craftsmen. These accurate levels help you to do your job easier and better. They have the real craftsman's feel, appearance, handle easily, and are easy to read.

Craftsman Aluminum Levels are gravity cast in a steel mold, (permanent molding) from a special aluminum alloy. Only the permanent mold frame, as compared to other methods of fabricating, is non-warping, yet has sufficient yield to prevent the frame from bending or breaking in normal use. It will absorb impact shock to an extent which reduces danger of glass or vial breakage, should the level be dropped. If the level should somehow be bent, it can be realigned. These levels are designed for easier handling, yet provide *maximum* strength at *minimum* weight. Working edges are precision milled to give extreme accuracy.

Craftsman Wood Levels are made of selected straight grain wood, which has been slowly air dried to a definite moisture content, and sealed against moisture with tough preservative finishes. These precautions guard against warping. The edges on these levels have been carefully machined. They are straight and parallel to very close limits, which in part, accounts for their extreme accuracy.



ADJUSTABLE VIALS

An important feature of Craftsman adjustable levels is the adjustable vial, which can be adjusted or replaced on the job. Each vial is independently mounted, and can be used for Plumb, Level, or 45° position. Any one of the three sight openings can be assembled to provide dual levels, plumbs or 45° settings. For pitch work, there is sufficient movement to throw vial a few degrees from true, Plumb, Level, or 45°. Each vial unit consists of the vial holder, protecting glass, and cover plate. Cover plate engages notches in vial holder to provide Plumb, Level, or 45°. Two cases interlock to make a complete sight. Replacement vial cases may be purchased from any Sears stores.

SOLID SET VIALS

Solid set vials are permanently set in a plastic vial casing. In Craftsman levels, this casing may be removed and replaced in case of breakage, but the protecting window must be removed and resealed. A Craftsman solid set level is easier to repair than other solid set levels.

Care of Wood Levels. To prevent warping, keep these levels in a cool, dry place. When not in use, hang them from a peg or nail on the wall to eliminate strain. Do not place them on an irregular surface for any length of time, as the weight of the level itself may cause warping. When the varnish or enamel wears off, apply a new coat as a seal against moisture. Linseed oil is a good protector. Avoid hammering on, banging about, or dropping the level.

TESTING FOR ACCURACY

How to Test Level Vials —

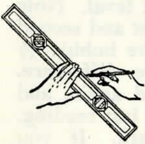
1. Place level's working edge on a flat, solid *horizontal* surface.
2. Block up one end so end of bubble rests against a vial marking. (Also Mark position of level on testing surface.)
3. Reverse level end for end, and place in exactly same position on block as marked in No. 2.
4. If end of bubble rests in same position against the same vial mark, level is correct.

How to Test Plumb Vials —

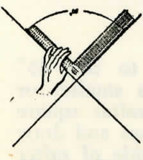
1. Plumb accuracy is tested with working edge against a *vertical* surface.
2. Place the level's working edge in a vertical position against the testing surface.

3. Note the position of the bubble relative to one of the markings. Mark position of level on testing surface.
4. Reverse the level working edge for working edge, and place it in exactly the same position as in No. 3.
5. If the bubble rests in the same relative position as noted in No. 3, the Plumb vial is correct.

How to Test 45° Vials —



1. Hold *side* of level flat against wall so bubble of the lower 45° vial rests between vial markings.
2. Draw a pencil line on the wall along the upper working edge of the level.
3. Turn level on other side, keeping same end and edge up. Place level in position so the line you will draw along the upper working edge, when the bubble is centered, will intersect the line you drew in No. 2.



4. Check angle formed by 2 pencil lines with a rafter square. If pencil lines check exactly with sides of square, the 45° vial is correct.

Note: These two 45° lines must be drawn very carefully. Also center the bubble carefully. Double error can result very easily.

TO TRUE A CRAFTSMAN ADJUSTABLE LEVEL

The vial to be adjusted should show letters "A" and "D" on the lower barrels facing you. Loosen the two screws holding cover plate, and then tighten down until plate is barely movable with fingers.

Adjusting the Level Vials. Proceed as you would to test level. Note the difference between first and second bubble readings, and move bubble ½ this amount to split the difference. Reverse level end for end again, and if the bubble checks with last reading, tighten screws down hard. If you want hairline accuracy, loosen screws just enough so bubble can be shifted very slightly by tapping shoulder of cover plate with butt end of screw driver. When the screws are tightened down hard, no rough handling will loosen the adjustment.

Plumb Vials are adjusted in the same manner, however, the level is reversed from edge to edge instead of end for end.

Adjusting 45° Vials.

Proceed as you would to test 45° vials. If angle formed is smaller or larger than 90°, center rafter square between the test angle lines and draw two new lines along outside of rafter square. Extend these lines and lay level along either line and adjust bubble to set between the vial marks. Tighten cover plate screws.

BENT FRAMES

No level can be properly adjusted if the frame is bent. A bent aluminum level can be re-straightened if the bend is not too sharp. Bent levels should be returned to the factory for repairs, or the old vial cases can be set into a new frame, thus avoiding delay and postage charges involved in returning to the factory. Sears can supply you with level frames.

HERE ARE SOME FACTS TO CONSIDER WHEN BUYING A LEVEL

If the Frame Is of Metal —

- It should be *gravity-cast* because only gravity-cast frames have molecular stability.
- It should be *gravity-cast* because this is the only type of metal frame that can be re-aligned if accidentally bent.
- *Gravity-cast* frames have enough impact yield to protect vials from shattering.
- *Gravity-cast* frame is designed and made for easy handling, with no sharp edges.
- *Gravity-cast* frame has working edges precision milled for die straight accuracy.

If the Frame Is of Wood —

- The wood should be straight-grained for strength and stability.

- The wood should be air dried to a definite moisture content for longer life, less chance of warping.
- The wood should be finished with tough preservatives to keep moisture out and prevent warping.
- The frame should be designed with easy-to-grasp finger grooves.
- The ends of mason levels should be protected with metal end plates.

Vials and Vial Cases —

- Vials should have the smallest possible curvature, as the slighter the curvature the greater the accuracy and sensitivity.
- Vials should be set in material that will not crack or dry out. This gives longer life, trustworthy accuracy.
- Vial material should act as a cushion between the vial and the vial holder to absorb shock, lessen chance of vial breakage.
- Vial case design and surface should be such that maximum light reaches the vial, for easier and accurate readings.
- Vial markings should be heat-fused to vial to eliminate inaccuracy that would occur if they wore off.

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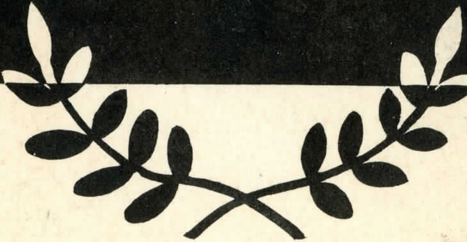

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